Amendments to The Claims

In the Claims

1. (Previously amended) A method of producing a transformed dicotyledonous plant, comprising:

(a) culturing a dicotyledonous plant tissue comprising a meristematic region on a shoot multiplication (SM) medium to produce a multiple shoot culture from the tissue;

(b) introducing a nucleic acid into a cell of the multiple shoot culture, thereby producing a transformed cell comprising the nucleic acid; and

(c) regenerating a transformed plant from the transformed cell;

wherein said dicotyledonous plant tissue is squash, melon, watermelon, sunflower, or sugarbeet tissue.

Claims 2-13 (Canceled)

Claims 14-16 (Withdrawn)

Claim 17 (Canceled)

18. (Previously amended) The method of Claim 1, wherein regenerating comprises:

selecting a multiple shoot culture comprising a transformed cell;

growing the multiple shoot culture under conditions that promote shoot elongation to produce at least one transformed shoot; and

growing the at least one transformed shoot.

Claims 19-21 (Canceled)

22. (Currently amended) A transformed plant cell produced during the method of claim 1, wherein the plant cell is from a plant selected from the group consisting of squash, watermelon, and sugarbeet.

23. (Previously amended) A multiple shoot culture produced during the method of claim 1.

24. (Currently amended) A transformed plant produced by the method of claim 1, wherein the plant cell is from a plant selected from the group consisting of squash, watermelon, and sugarbeet.

Claims 25-28 (Withdrawn)

29. (Currently amended) A seed produced by the transformed plant of Claim 24, wherein the seed comprises the nucleic acid transformed into the multiple shoot culture, wherein the seed is from a plant selected from the group consisting of squash, watermelon, and sugarbeet.

Claims 30-50 (Canceled)

51. (Previously added) The method of claim 1, wherein said dicotyledonous plant tissue is squash, melon, watermelon, or sunflower tissue comprising either a cotyledonary petiole from a germinating seedling or a shoot tip from a germinating seedling, and said cotyledonary petiole or said shoot tip is cultured on SM medium comprising about 2 to 4 mg/L 6-benzyl-aminopurine (BA).

52. (Previously added) The method of claim 51, wherein said SM medium further comprises MS salts, about 30 g/L sucrose, B5 vitamins, and about 4g/L Phytagel™.

53. (Previously added) The method of claim 1, wherein said dicotyledonous plant tissue is sugarbeet tissue comprising a shoot tip from a germinating seedling cultured on SM medium comprising about 1 to 10 mg/L of at least one cytokinin growth regulator, and said shoot tip is subcultured to fresh SM medium, after removing any new elongated leaf material, about every 7 to 10 days for about 4 to 6 weeks.

54. (Previously added) The method of claim 53, wherein said cytokinin growth regulator comprises at leat one of BA, kinetin, 2-ip, and zeatin.

55. (Previously added) The method of claim 53, wherein said shoot tip comprises apical and axillary shoot meistematic regions, leaf primordia, and a portion of a hypocotyl.

56. (Previously added) The method of claim 53, wherein said SM medium comprises MS salts, about 30 g/L sucrose, B5 vitamins, and about 8g/L Phytagel™.

57. (Previously added) The method of claim 1, wherein said SM medium further comprises auxin-like growth regulators.

58. (Previously added) The method of claim 1, wherein said nucleic acid is introduced into said cell using *Agrobacterium*.

59. (Previously added) The method of claim 58, wherein a scalpel blade is used to introduce said *Agrobacterium* into at least one of an apical and an axillary meristem region of said multiple shoot culture.

60. (Previously added) The method of claim 59, further comprising applying about 4 to 6 µl of MSMG (MS salts, about 2 g/L glucose, MES, and about 200 µM acetosyringone) to a wounded surface following introduction of said *Agrobacterium*.

61. (Previously added) The method of claim 1, wherein said nucleic acid comprises a nucleic acid that is heterologous to the dicotyledonous plant.

62. (Previously added) The method of claim 18, wherein said dicotyledonous plant tissue is sugarbeet tissue and said conditions that promote shoot elongation comprise culturing on a shoot elongation medium comprising MS salts, B5 vitamins, about 30% sucrose, Phytagel™, and about 0.1 to 1.0 mg/l cytokinin.

63. (Previously added) The method of claim 62, wherein said cytokinin comprises about 0.5 mg/L kinetin.

64. (Currently amended) A method of producing a transformed dicotyledonous plant, comprising:

culturing a dicotyledonous plant tissue comprising a meristematic region on a shoot multiplication (SM) medium to produce a multiple shoot culture from said tissue;

using *Agrobacterium* to introduce a nucleic acid into a cell of said multiple shoot culture, thereby producing a transformed cell comprising said nucleic acid; and

regenerating a transformed plant from said transformed cell;

wherein said dicotyledonous plant tissue is from a plant of any family selected from *Cucurbitaceae*, and *Chenopodiaceae*, ~~and *Asteraceae*~~.